

REMARKS

Claims 11-21 are pending in the application, with claim 11 being independent.

Request to Withdraw Finality

Although a new ground of rejection (based on the Hambric patent) is raised, such new ground is not stated to be or shown to be necessitated by changes made to the claims in the previously filed Amendment. Such changes to claims did not necessitate a new ground of rejection relative to the newly applied Hambric patent, since the Hambric patent is applied only for limitations from the original claims. Accordingly, the finality of the Office Action is premature and should be withdrawn.

Rejections Under 35 U.S.C. § 103

Claim 11 covers a lubricating device comprising first and second gear stages 16 and 18, a lubricant circuit 20 and an immersion bath 28. The gear stages are mounted next to one another and are dynamically connected to one another. The lubricant circuit has at least one filter 26, a lubricant supply 38 for providing lubricant to the first gear stage, and a lubricant outlet 40 for removing lubricant from the second gear stage. Circulating lubricant is drawn from the lubricant outlet to the filter for cleaning, and is then conveyed to the lubricant supply. The immersion bath receives individually and at least partially each of the two gear stages for the gear stages to pass through the immersion bath for splash lubrication of the gear stages. The immersion bath has a lubricant reserve and a subdivision 30 separating the immersion bath into first and second bath areas 32 and 34 for the first and second gear stages, respectively. The subdivision has a configuration and the lubricant reserve has an amount such that the lubricant overflows the

subdivision to be conveyed from the first bath area to the second bath area. The first bath area has the lubricant supply, while the second bath area has the lubricant outlet.

By forming the lubricating device in this manner, a good flow of the lubricant is provided throughout the entire device, avoiding stagnation areas of lubricant. The lubricant is distributed onto the first gear stage and collects in the first bath. Fluid overflowing the subdivision 30 enters the second bath for lubricating the second gear stage. The lubricant in the second bath is then withdrawn from the immersion bath via outlet 40 and is conveyed by pump 22 through the filter and then back to the lubricant supply.

Claims 11 and 14-16 stand rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 5,279,391 to Ward in view of U.S. Patent No. 4,420,990 to Hauser. The Ward patent is cited as disclosing a lubricating device having gear stages mounted adjacent one another and dynamically connected. A lubricant circuit is allegedly provided with a filter 48, a lubricant supply 51 supplying lubricant to the first gear stage, the lubricant inlet 46 for removing lubricant from the second gear stage and circulating lubricant from lubricant outlet to the filter. Reservoir 40 is interpreted as an immersion bath. The Hauser patent is cited for a filler 18 inside a transmission casing 11 separating gears A,B,C allegedly to provide separate immersion baths filled with oil. In support of the rejection, it is alleged that it would be obvious to provide the Hauser transmission filler in the Ward transmission to occupy space in the transmission between the gears and housing 11. Relative to claims 14 and 15, the Ward patent allegedly discloses a suction device, a motor pump 44, and an injection device, and a nozzle 51 mounted diagonally opposite one another in the upper and lower areas of the transmission housing. Relative to claim 16, the Ward filter unit is allegedly mounted between the pump unit 44 and gear housing 12.

Claims 17-21 stand rejected under 35 U.S.C. §103 as being unpatentable over the Ward and Hauser patents when further considered in view U.S. Patent No. 7,279,091 to Sann. The Sann patent is cited for a filter unit having a first fine filter 12, a bypass 22 and a coarse filter 32 connected in series with the first filter and the fineness of the coarse filter being 5 to 10 times greater than the fine filter. In support of the rejection, it is alleged that it would be obvious to use the Sann filter in the Ward system.

Claim 11 is patentably distinguishable over the Ward, Hauser and Sann patents considered individually or in any obvious combination thereof by the combination of the separate immersion bath areas for the separate gear stages in combination with the specific lubricant flow, including the overflow over the subdivision 30. The Ward, Hauser and Sann patents fail to disclose or render such structure obvious, particularly by the failure of Ward gears 22, 26, 28, 30, 32 and 34 to pass through immersion bath sections and of the Hauser filler to have overflow between its various sections.

The Ward patent discloses a dry sump mechanical transmission where only the gear 56 is immersed within lubricant 42 within lubricant reservoir 40. None of the other gears 22, 26, 28, 30, 32 and 34 are disclosed as being immersed. Thus, the Ward patent does not teach multiple gear stages immersed in separate immersion bath areas. Particularly, the Ward patent only discloses a single bath area provided by reservoir 40, and separating gears 22, 26, 28, 30, 32 and 34 from that single bath in housing 12 such that they are not immersed in that single bath (reservoir 40).

Such deficiencies in the Ward patent are not satisfied by any of the other cited patents, particularly the Hauser patent. The Hauser patent discloses a transmission having a filler 18 to

occupy most of the space of the transmission between the gears A-G in housing 11. The Hauser patent fails to disclose any flow of the lubricant from outside of the housing, through the housing and then to outside the housing, or even between the various pre-elected locations 27.

Specifically, there is no disclosure of overflow between the walls separating the locations 27 in the Hauser patent. Even if it is assumed for the sake of argument only to be obvious to add the teaching of the Hauser patent to the Ward reservoir, such combination would only provide a filler 18 within reservoir 42 about gear 56. One of ordinary skill in the art would not find providing the Hauser filler in the cavity 11 of housing 12 of the Ward transmission obvious since such cavity does not have an immersion bath for the gear stages located therein. The combination would not teach providing first and second baths for first and second gear stages, respectively, separated by a subdivision 30, since neither cited patent discloses that claimed arrangement. Additionally, it would anticipate or render obvious the subdivision configuration and lubricant amount such that the claimed overflow would occur, again since neither cited patent discloses such overflow, a feature not addressed in the rejection of claim 11.

Thus, the subject matter of claim 11 is not anticipated or rendered by the Ward patent, the Hauser patent, or any obvious combination thereof.

Claims 11-13 also stand rejected under 35 U.S.C. §103 as being unpatentable over the newly cited U.S. Patent No. 4,590,820 to Hambric in view of the Ward and Hauser patents. The Hambric patent is cited for one power station having planetary or spur gears mounted next to and dynamically connected to one another, a lubrication circuit 46 with a lubricant supply for the first gear stage, and an immersion bath allegedly provided by the interior of casing 14b. The Ward patent is cited for a gearing unit with a lubricating circuit having a filter 48, a lubricant supply, a

lubricant inlet 46 removing lubricant from a second gear stage 24 and circulating lubricant from the inlet to the filter and then to the lubricant supply. In support of the rejection, it is alleged that it would be obvious to add the Ward lubricant circuit and filter to the Hambric apparatus. The Hauser patent again cited relative to individual immersion baths which the Examiner contends would be obvious to add to the Hambric apparatus after being modified in view of the Ward patent as alleged above.

This new rejection suffers from the same deficiencies discussed above relative to the combination of the Ward and Hauser patents. Moreover, this intricate and complex combination alleged to be obvious is based solely and improperly on a hindsight reconstruction of the structures disclosed in the cited patents in view of the applicants' disclosure. This rejection proposed modifying the Hambric device in view of the Ward patent, and then changing that modification based on the Hauser patent. Such modification of a modifying reference is an indication of unobviousness.

Further, the Hambric transmission 10 is housed in casings 14a and 14b, with oil supplied via jets 36 to the interior of gears 50 and channeled by centrifugal force through opening 51 to lubricate the end bearings (col. 4, lines 24-39). Oil is also distributed through manifold 100 and jets 104 to gears 32 and 56 (col. 5, line 43 to col. 6, line 10). Neither of these lubrication streams are immersion baths for splash lubrication, as claimed.

Accordingly, claim 11 is patentably distinguishable over the cited patents.

Claims 12-21 being dependent upon claim 11, are also allowable for the above reasons. Moreover, these dependent claims recite additional features further distinguishing them over the cited patents.

Claim 12 is further distinguished by the gear stages being parts of a wind power station. None of the cited patents appear to relate to a wind power station, including the Hambric patent that is disclosed for coupling to a high speed steam turbine (col. 3, lines 28-35).

Claim 13 is further distinguished by the first gear stage comprising a planet gear while the second gear stage comprises a spur gear, within the overall claimed combination.

Claim 14 is further distinguished by the suction device and the injection device being located diagonally opposite each another. Such diagonal orientation is not provided in the Ward patent, particularly within the overall claimed combination.

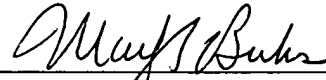
Claim 15 is further distinguished by the motor pump unit, particularly within the overall claimed combination.

Claim 16 is further distinguished by the filter mounting within the overall claimed combination.

Claims 17-21 are further distinguished by the particular filter constructions used in combination with the claimed lubricating device. Although such filter structure is disclosed in the cited Sann patent, it does not disclose the use of that filter within the particularly claimed lubricating device.

In view of the foregoing, claims 11-21 are allowable. Prompt and favorable action is solicited.

Respectfully submitted,



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